

### **REMARKS/ARGUMENTS**

Claims 1-17 were presented for examination and are pending in this application. In a Final Official Office Action dated July 13, 2009 claims 1-17 were rejected. The Applicant thanks the Examiner for his consideration and addresses the Examiner's comments concerning the claims pending in this application below.

Applicant herein amends claims 1, 6 and 7 and respectfully traverses the Examiner's prior rejections. No claims are currently cancelled and no new claims are added. These changes are believed not to introduce new matter, and their entry is respectfully requested. The claims have been amended to expedite the prosecution and issuance of the application. In making this amendment, the Applicant has not and is not narrowing the scope of the protection to which the Applicant considers the claimed invention to be entitled and does not concede, directly or by implication, that the subject matter of such claims was in fact disclosed or taught by the cited prior art. Rather, the Applicant reserves the right to pursue such protection at a later point in time and merely seeks to pursue protection for the subject matter presented in this submission.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding rejections and withdraw them.

#### **Rejection of the Claims**

Claims 6-8 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by U.S. Patent No. 7,149,213 issued to Rosner, *et al.* ("Rosner"). Claims 1-5 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Rosner in view of U.S. Patent Application Publication No. 2002/0065045 issued to Kim. Claims 9-11 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Rosner in view of Kim and further in view of U.S. Patent



Application Publication No. 2001/0024433 issued to Vanttinen. Claims 12-17 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Rosner in view of Vanttinen. Applicant respectfully traverses these rejections for at least the following reasons.

MPEP §2131 provides:

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegall Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir.1987). “The identical invention must be shown in as complete detail as contained in the claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

The test for anticipation is not a literal word for word comparison between the prior art and the commercial embodiment of the patentee's invention; the test is whether “each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1570, 7 USPQ2d 1057, 1064 (Fed. Cir. 1988) (emphasis added).

The claims as currently amended recite features lacking in the applied reference. For example, independent claim 1 states among other things (and claims 6 and 7 in varying language), “wherein said baseband processor tunes the tunable radio-frequency subsystem by performing a particular independent operation more than once from a same definition in the operation definition table pointed to by the pointer during the processing of, and in synchronism with, said one signal data frame.” Rosner, the art cited as being anticipatory for claim 6 and acting as the primary reference for claims 6 and 7, fails to disclose, teach or suggest this aspect of the present invention.



Before discussing the teachings of Rosner, it may be beneficial to revisit what the Applicant recognized at the time the invention was made as the deficiencies of the prior art and how the present invention overcomes these deficits. The present invention relates to a broadband processor and a method for transmitting commands to a radio frequency subsystem. As was known in the prior art at the time the invention was made, in a conventional mobile phone upon reception of a radio signal, a radio frequency subsystem receives the radio signal and converts the radio signals into baseband signals. This subsystem then sends the baseband signals to a baseband processor. Thereafter the baseband processor processes the received information which ultimately controls other machine interfaces within the mobile phone.

During transmission, the baseband processor generates the baseband signal and sends it to the radio frequency subsystem for transmission. In order to move accurately process each frame, the tuning of the radio frequency subsystem must change several times during processing of each frame. To do so, the baseband processor maintains and transmits commands to the radio frequency subsystems during the frame processing. The timing command sequence between the baseband processor and the radio frequency subsystem must be controlled very accurately and in order to achieve this fine timing resolution the calculator of the baseband processor computes a list of events before beginning processing of each frame. Indeed a sequence or succession of commands must be transmitted to the radio frequency subsystem. Oftentimes during the processing of one frame the same operation or sequence of commands must be repeated several times. In the prior art these lists of commands, even though repeated, are individually stored in a repetitive nature. This repetition of the same commands results in ineffective use of storage space in a device possessing limited memory.



The present invention provides a baseband processor which requires smaller storage space for such processing commands, yet achieving the same timing reliability. According to the present invention a storage unit comprises first and second descriptors respectively for a first and second occurrence of the same operation. The first and second descriptors also comprise a field that points to the same definition of the operation on an operation definition table. Therefore, the sequence of events corresponding to the same operation is stored only once even when the operation has to be executed several times during the processing of the frame.

This aspect of the present invention is described in the last element of claim 1 (as well as claims 6 and 7) as quoted above. The current rejection asserts that column 17, lines 50-61 of Rosner teaches such a process. A careful reading of this cited text of Rosner as well as the text that precedes and follows finds that Rosner does not teach a methodology or structure that would reduce memory storage requirements.

Rosner appears to teach a method by which to correct an error condition during the processing of one or more commands. According to Rosner at column 17, lines 35-38, "...if an error condition is detected ... the status information of that error is uploaded to system memory 36 and stored into status/control 68 of the S/W queue element 60 that was in error. Then DMA/Buffer 46 uses the previous frame pointer (first frame pointer) ... to reinitiate the previous sequence ...." Thus in Rosner, the number of operations stored in memory are not reduced but simply repeated if there is an indication of an error. The memory for a particular sequence of events still contains a number of repeated identical commands and, when an error in one of those command sequences is identified, it is repeated. Significantly, that command may be one of several held in memory that are identical.



The U.S. Patent and Trademark Office ("PTO") has failed to establish a *prima facie* case of obviousness. In KSR the court reaffirmed the *Graham* factors in the determination of obviousness under 35 U.S.C. § 103. See *KSR International Inc. v. Teleflex Inc.*, 127 S.Ct.1727 (2007). Specifically, the obviousness analysis is based on four underlying factual inquiries, the well-known *Graham* factors: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the pertinent art; and (4) secondary considerations, if any, of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *Kegel Co., Inc. v. AMF Bowling, Inc.*, 127 F.3d 1420, 1430, 44 USPQ2d 1123, 1130 (Fed. Cir. 1997). The court in KSR did not reject the fact that the prior art reference (or references when combined) must teach or suggest all the claim limitations. *Id.* What a reference teaches is a question of fact. *In re Beattie*, 974 F.2d 1309, 1311 (Fed. Cir. 1992) (citing *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1579 n.42, 1 USPQ2d 1593, 1606 n.42 (Fed. Cir. 1987)). The Federal Circuit has held many times that to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

The present invention removes duplication and provides an efficient means by which to dispatch command during the repetitive tuning of a radio-frequency subsystem. By this proposed amendment the Applicant introduces that each independent command can be pointed to repeatedly using the pointer field and descriptor table. This feature is neither disclosed, taught or suggested by the prior art. Reconsideration is respectfully requested.

Applicant believes that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated objections and



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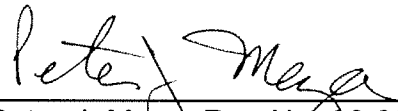
grounds for rejection have been overcome or rendered moot. Accordingly, Applicant respectfully submits that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicant's undersigned representative at the number below to expedite prosecution. Prompt and favorable consideration of this Reply is respectfully requested.

No fee is believed due for this submittal. However, any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,

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